Water Quality Report 2010

Summary – all contaminants measured within this report were compliant with EPA guidelines.

Creating a Sustainable Water Supply

July 2011

During drought conditions, our dependency on water to sustain life and business in Lubbock is accentuated. Knowing that the weather patterns on the South Plains are unpredictable, the City of Lubbock continues to proactively lay the groundwork for a sustainable water supply. Our strategy includes three objectives: 1) Conserve Water, 2) Diversify Water Sources, and 3) Reuse Water.

Conservation

In the past decade, the citizens of Lubbock have worked hard to conserve water. In 1998, the City's water consumption was 223 gallons per capita per day (GPCD). By 2010, the water consumption had dropped more than 35% to 141 GPCD. The dramatic drop in water usage can be attributed to educating the public, the increasing cost of water, implementing "waste of water" regulations, and the desire of the people in the city to do the right thing. Most of our citizenry know that water is a precious resource that is becoming more expensive to find and deliver.

Diversification

Diversification of our sources of water is the safest approach to developing a sustainable supply of water. Both groundwater and surface water sources have their strengths and weaknesses. The City currently uses water from two groundwater sources (Roberts County and Bailey County Well Fields) and one surface water source (Lake Meredith). The best example of the need to diversify is the current condition of Lake Meredith. The top right picture was taken of Lake Meredith in 1999. The bottom right picture was taken in 2011 at the same location. The water in the lake has disappeared. Due to a decade long drought in the area, Lake Meredith has dropped from supplying Lubbock with over 90% of our water to less than 5% of our water in 2011. Thus the need for Lake Alan Henry.

By the end of 2012, the City will begin delivery of water from Lake Alan Henry. The Lake Alan Henry pipeline and facilities are currently under construction and are approximately 40% complete. The completion of this very important project is vital to the sustainability of Lubbock's drinking water supply.

Reuse

The cost to transport water to the City of Lubbock is very high and the City's goal is to make every drop count. With this goal in mind, the City continues to take steps to eventually reuse its treated wastewater. Upgrades to the City's Wastewater Reclamation Plant are nearing completion and the City will treat the wastewater to stream-quality standards with the ability to discharge it into the Canyon Lakes. As part of the water recycling process, the City must also secure water supply and reuse permits from appropriate regulatory agencies. These permits are necessary for the discharge, storage, diversion, and use of water in streams, rivers, and reservoirs.

These three objectives will help provide the citizens in Lubbock with a sustainable water supply so they can enjoy living on the South Plains for generations to come.

Water Source

Lubbock's drinking water comes from both surface and groundwater sources. The Canadian River Municipal Water Authority (CRMWA) provides 75-85% of Lubbock's water supply from Lake Meredith and from Roberts County Well Field. Lake Meredith is located by Sanford, Texas, about 164 miles north of Lubbock, and the Roberts County Well Field is located about 40 miles east of Lake Meredith. The City owned Bailey County Well Field (BCWF) provides 15-25% of the City's water supply and is located about 65 miles northwest of Lubbock. During 2010, the citizens of Lubbock used 11.85 billion gallons of water with 9.38 billion gallons supplied by CRMWA and 2.47 billion gallons came from BCWF.

EPA Guidelines for Your Water

This report is a summary of the quality of the water the City of Lubbock provides to our customers. The analysis was made by using data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented in the attached pages. We hope this information helps you become more knowledgeable about what is in your drinking water. This report represents data for the year 2010.

Why Source Water Quality is Assessed

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, and in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water before treatment include: microbes, inorganic contaminants, pesticides, herbicides, radioactive contaminants, and organic chemical contaminants.

Special Information for People with Immune Systems Deficiencies

You may be more vulnerable than the general population to certain microbial contaminants, such as Cryptosporidium, in drinking water. Infants, some elderly or immuno-compromised persons such as those undergoing chemotherapy for cancer; those who have undergone organ transplants; those who are undergoing treatment with steroids and people with HIV/AIDS or other immune system disorders can be particularly at risk from infections. You should seek advice about drinking water from your physician or health care provider. Additional guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline at 1-800-426-4791.

Tap Water versus Bottled Water

When drinking water meets federal standards there may not be any health-based benefits to purchasing bottled water or point of use devices. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. Contaminants may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. For more information concerning taste, odor or color of drinking water, please call 806-775-2588. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

Water Odor and Taste

Many constituents, (such as calcium, sodium, or iron) which are often found in drinking water, can cause taste, color, and odor problems. The taste and odor constituents are called secondary constituents and are regulated by the State of Texas, not the EPA. These constituents are not causes for health concern. Therefore, secondaries are not required to be reported in this document but they may greatly affect the appearance and taste of your water.

About This Table

The pages that follow list all of the federally regulated or monitored contaminants that have been found in your drinking water. The U.S. EPA requires water systems to test for up to 97 contaminants.

Term	Definition
AL	**Action Level –** if a contaminant rises above this level, treatment is required
MCL	**Maximum Contaminant Level** – the highest contaminant level legally allowed
MCLG	**Maximum Contaminant Level Goal –** the contaminant level below which there is no known health risk
MRDL	**Maximum Residual Disinfectant Level –** the highest disinfectant level legally allowed
MRDLG	**Maximum Residual Disinfectant Level Goal –** the disinfectant level below which there is no known health risk
NTU	**Nephelometric Turbidity Units –** a measure of the cloudiness of the water
ppb	**part per billion –** one part per billion or micrograms per liter
ppm	**part per million –** one part per million or milligrams per liter
Range	The lowest and highest contaminant levels measured
TT	**Treatment Technique –** a process intended to reduce the level of a contaminant in drinking water

The State allows us to monitor for some substances less than once a year because the concentration of these substances do not change frequently. Some of our data, though representative, are more than one year old.

^ Secondary Constituent Levels set by the Texas Commission of Environmental Quality.

* The MCL for beta particles is 4 mrem/year. EPA considers 50 pCi/L to be the level of concern for beta particles.

~ (90^{th} percentile) No sites exceeded AL

Contaminant	Year	MCL	Highest Level Detected	MCLG	Range	Contamination Source	Compliant
Regulated At Treatment Plant							
Alpha emitters	2005	15 pCi/L	5 pCi/L	0	N/A	Erosion of natural deposits	Yes
Arsenic	2004 - 2005	10 ppb	4 ppb	0	2 – 4 ppb	Erosion of natural deposits, runoff from orchards	Yes
Barium	2004 - 2005	2 ppm	0.15 ppm	2 ppm	0.10 - 0.15 ppm	Erosion of natural deposits	Yes
Beta/photon emitters	2005	50 pCi/L*	6.5 pCi/L	0	N/A	Decay of natural and man-made deposits	Yes
Chloramines	2010	MRDL = 4.0 ppm	3.9 ppm	MRDLG = 4.0ppm	0.5 - 3.9 ppm	Disinfectant used to control microbes	Yes
Chromium	2004 -2005	100 ppb	6.7 ppb	100 ppb	0 - 6.7 ppb	Erosion of natural deposits	Yes
Cyanide	2009	200 ppb	70 ppb	200 ppb	30 - 70 ppb	Erosion of natural deposits	Yes
Fluoride	2008 - 2010	4 ppm	1.46 ppm	4 ppm	0.71 – 1.46 ppm	Erosion of natural deposits	Yes
Nitrate	2010	10 ppm	1.65 ppm	10 ppm	.86 - 1.65 ppm	Runoff from fertilizer use, leaching from septic tanks, sewage, erosion	Yes
Nitrite	2005	1 ppm	0.13 ppm	1 ppm	0.01 - 0.13 ppm	Runoff from fertilizer use, leaching from septic tanks, sewage, erosion	Yes
Radium 226 & 228 combined	2005	5 pCi/L	0.7 pCi/L	0	N/A	Erosion of natural deposits	Yes
Total organic carbon	2010	TT	3.29 ppm	TT	2.22 - 3.29 ppm	Naturally present in environment	Yes
Turbidity	2010	TT = 5 NTU (TT = % of samples <0.3 NTU)	0.13 NTU (100%)	0	0.03 - 0.13 NTU	Soil runoff	Yes
Additional Monitoring							
Aluminum	2010	0.05 - 0.2ppm^	0.144 ppm	N/A	N/A	Water treatment chemical	Yes
Ammonia	2010	Unregulated	0.386 ppm	N/A	N/A	Water treatment chemical	Yes
Calcium	2004 - 2005	Unregulated	62 ppm	N/A	59 - 62 ppm	Naturally occurring	Yes
Chloride	2010	300 ppm ^	378 ppm	N/A	N/A	Naturally occurring	Yes
Conductance	2010	Unregulated	2144 micromhos/cm	N/A	N/A	Naturally occurring	Yes
Hardness	2010	Unregulated	343 ppm	N/A	218 - 259 ppm	Naturally occurring	Yes
Magnesium	2004 - 2005	Unregulated	35 ppm	N/A	14.1 - 35 ppm	Naturally occurring	Yes
Nickel	2004 - 2005	Unregulated	0.002 ppm	N/A	N/A	Erosion of natural deposits	Yes
Sodium	2010	Unregulated	290 ppm	N/A	N/A	Naturally occurring	Yes
Sulfate	2010	300 ppm ^	237 ppm	N/A	N/A	Naturally occurring	Yes
Total alkalinity	2010	Unregulated	179 ppm	N/A	N/A	Naturally occurring	Yes
Total dissolved solids	2010	1000 ppm^	1180 ppm	N/A	N/A	Naturally occurring	Yes
Zinc	2004 - 2005	5 ppm^	0.004 ppm	N/A	N/A	Naturally occurring	Yes
Regulated At The Customers' Tap							
Copper	2009	1.3 ppm AL	0.103 ppm ~	1.103 ppm	0.018 - 0.243ppm	Erosion of natural deposits, corrosion of household plumbing systems	Yes
Lead	2009	15 ppb AL	1.72 ppb ~	0	0 - 6.91 ppb	Erosion of natural deposits, corrosion of household plumbing systems	Yes
Unregulated Initial Distribution System Evaluation For Disinfection Byproducts							
Total haloacetic acids	2008	N/A	15.4 ppb	N/A	0 - 21.8 ppb	By-product of drinking water disinfection	Yes
Total trihalomethanes	2008	N/A	31.9 ppb	N/A	0 - 45.6 ppb	By-product of drinking water disinfection	Yes
Regulated In The Distribution System							
Haloacetic acids (5)	2010	60 ppb	8.2 ppb	N/A	4.1 - 10.6 ppb	By-product of drinking water chlorination	Yes
Total coliform	2010	Coliform bacteria present in 5% or more of the monthly samples	2.86%	0	0 – 2.86%	Naturally present in the environment	Yes
Total trihalomethanes	2010	80 ppb	22.8 ppb	N/A	13.4 – 26.2 ppb	By-product of drinking water chlorination	Yes
Unregulated Contaminants							
Bromodichloromethane	2010	N/A	5.1 ppb	N/A	N/A	By-product of drinking water disinfection	Yes
Bromoform	2010	N/A	3.3 ppb	N/A	N/A	By-product of drinking water disinfection	Yes
Chloroform	2010	N/A	1.7 ppb	N/A	N/A	By-product of drinking water disinfection	Yes
Dibromochloromethane	2010	N/A	8.6 ppb	N/A	N/A	By-product of drinking water disinfection	Yes
Unregulated Contaminant Monitoring Rule 2 Data Collection							
N-Nitrosodimethlamine	2010	N/A	0.0046 ppb	N/A	0-0.0046 ppb	By-product of drinking water disinfection, industrial solvent, rocket fuel production	Yes

Este reporte incluye información importante sobre el agua potable. Para asistencia en español, favor de llamar al teléfono 806-775-3596. En español, http://water.ci.lubbock.tx.us

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Where to Find Additional Information about Your Water

A Source Water Susceptibility Assessment for your drinking water sources is currently being updated by the Texas Commission on Environmental Quality. This information describes the susceptibility and types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. The information contained in the assessment allows us to focus our protection strategies. Some of this source water assessment information will be available later this year on Texas Drinking Water Watch at http://dww.tceq.state.tx.us/DWW/. For more information on source water assessments and protection efforts at our system, please contact us.

Water Quality Contact Information

The Safe Drinking Water Hotline: **800-426-4791**
City of Lubbock Water Treatment Lab: **806-775-2614**
Weekdays 7:30 a.m. and 4:30 p.m.
Lubbock Water Utilities Department of Education and Backflow Compliance: **806-775-3596**
Weekdays 8 a.m. and 5 p.m.
City of Lubbock Water Department Website: **http://water.ci.lubbock.tx.us**

Homes with Lead Piping

Elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. This water supply is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.